

**JOINT SPECIAL HEARING: ROUTT COUNTY PLANNING COMMISSION & BOARD OF  
COUNTY COMMISSIONERS**

**Thursday, September 14, 2023**

**6:00 PM**

**Board of County Commissioners Hearing Room; 522 Lincoln Ave., 3rd Floor, Steamboat  
Springs, CO 80487**

This hearing is available in person and through Zoom. You may access the hearing by joining our Zoom  
Meeting [here](#).

Live audio is available by calling (669) 900-6833.

Meeting ID: 880 7418 8565

Password: 12345

**1. CALL TO ORDER**

**2. PUBLIC COMMENT**

Members of the public may address the Planning Commission on items not on the agenda. (Comments regarding items on the agenda will be taken during that agenda item.)

**3. ITEMS FOR CONSIDERATION**

**A. REVIEW AND CONSIDERATION TO ADOPT MODULE ONE OF THE COUNTY'S  
NEW UNIFIED DEVELOPMENT CODE (UDC)**

Documents:

[cover Memo \(002\).pdf](#)

[Introduction\\_230906.pdf](#)

[Powers and Duties\\_230907.pdf](#)

[Renewable Energy Code\\_clean with redlines\\_230908.pdf](#)

[Renewable Energy Code\\_clean\\_230908.pdf](#)

[LandUseCodeBondRequirements\\_RouttCounty\\_20230906.pdf](#)

[CHECKLIST.pdf](#)

**4. ADMINISTRATOR'S REPORT**

Administrator's Report may include the reading of future Planning Commission agendas and recent Board of County Commissioner decisions.

**5. ADJOURNMENT**

Agenda packets can be accessed at [www.co.routt.co.us/AgendaCenter](http://www.co.routt.co.us/AgendaCenter).

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## Memorandum

**To:** Board of County Commissioners and Planning Commission  
**From:** Project Team  
**Date:** September 14, 2023  
**Subject:** Review and consideration of adoption of Module #1 to the County's new Unified Development Code (UDC).

**Attachments:**

- Introduction section - clean only
- Agencies section - clean only
- Solar - simplified redline
- Solar - clean
- Letter from COSSA regarding bond timing requirement

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### Memo Purpose

Tonight's agenda item is intended for review and to consider adoption of Module 1 to the County's new Unified Development Code (UDC). Specifically, sections in Module 1 include the Introduction, Agencies, and Solar sections. The project team will provide an overview of key changes and potential topics of discussion included below. Clean versions and a redline version of Solar were included for your consideration. Staff also included suggested motions provided below.

#### PC motion:

I move to recommend approval of the adoption of Module 1 of the new Unified Development Code. The sections in Module 1 include the Introduction, Agencies, and Solar.

#### BCC motion:

1. I move to approve the adoption of Module 1 of the new Unified Development Code. The sections in Module 1 include the Introduction, Agencies, and Solar.
2. I move to authorize the Chair's signature on the resolution adopting Module 1 of the Unified Development Code.

### Overview

This memo is intended to summarize the changes to the Solar Energy code section since the last joint Board of County Commissioners and Planning Commission meeting in July. Please note, the summarized changes below identify the key changes since the groups' reviewed draft language in July.

## Solar Regulations Revisions

### Definitions

Multiple definitions were added for clarification, including wildlife corridor, connectivity, and micro-grid. These definitions serve to avoid ambiguity and ensure consistent interpretation and application by staff, developers, and other stakeholders.

### Small Scale Solar Energy Systems

The setback of small-scale solar energy systems was refined to enable ground mounted systems to go to the property line setback or up to 15 feet, depending on whichever is less. This allows for a more streamlined process and helps avoid additional variances or administrative reviews.

### Performance Standards for Utility and Community Scale SES.

#### 1. Site Planning:

- Coordination with electric utilities is required. The previous version specified coordination with YVEA, and this is revised to apply more broadly to utility providers.
- A standard was added to explicitly allow collective lots to cross easements with informed consent. This goes a step further than allowing collective grouping by ensuring that easements have been considered.
- Facilities are subject to the waterbody setbacks in Section 5.11.5, Minimum Setbacks from a Waterbody. This mitigates potential for flooding and the impact of a facility on waterbodies.
- Due to discussion that dust is most impactful during construction, the required dust mitigation plan is specific to the duration of construction. A specification was also added to the mitigation plan to prioritize gravel or chemical stabilization over water to maximize dust mitigation.
- The requirements for workforce housing were adjusted to require, yet provide more flexibility in providing, housing and a plan for transportation of workers. This allows creativity in complying with the requirement.
- The screening requirements were revised to require screening for transformers, stations, and battery enclosures only. Screening of panels is not required, though is encouraged.
- Emergency Response Plan standards have been added.
- Clarification of what process the applicant must go through for a Road Engineering Study has been included. Staff will provide details on this process at the hearing.

#### 2. Agricultural Lands

- This section is updated to focus on the long-term ownership and economic value of agricultural land. This is a revision from the previous version of explicitly prohibiting solar development on prime farmland.

#### 3. Wildlife

- Standards have been updated to incorporate comments from CPW related to pre- and post-development wildlife surveys, as well as consolidating fencing information.
4. Benefit Analysis
- Standards under this newly developed section require an analysis of the impacts to the economy, community, transportation, infrastructure, and recreation as well as the long-term viability of the project. These requirements identify quantifiable benchmarks that allow staff, applicants, and the community to weigh the benefits and impacts to the economy and community.

### **Potential Topics for Discussion:**

The following items have come up through the public review process, and the Planning Commission and Board of County Commissioners may desire to discuss these. A brief summary is provided below.

1. Screening of equipment (not panels)
  - a. Based on feedback from the community, including solar groups, the screening requirements have been adjusted to require screening only for equipment. As mentioned above, screening of solar panels is encouraged, but not required. Given the scale for these solar energy systems, it is unlikely that an entire area of solar panels can effectively be screened from all views.
2. Timing of bond.
  - a. The current language includes bonding requirements at the time of building permit. Some industry groups have provided comments that a later timeframe for a reclamation bond should be included. The draft language has included a reclamation bond at the time of building permit issuance to ensure any site issues can be addressed should there be a pause in construction or some other issue that prevents the project from moving forward.
3. Timing of reclamation.
  - a. The draft language requires decommissioning / reclamation to occur within 12 months after the solar energy system equipment is removed, the power is disconnected, or the land lease ends. It also requires the decommissioning and reclamation process to be completed within 24 months from the start of work. These timeframes are intended to provide protection to the County and property owners that the land will be returned to a usable state following the end of the solar energy system's life cycle.
4. Submittal Checklist
  - a. The solar industry has stated that having a clear submittal checklist is important. Attached is the final draft of the submittal checklist. Submittal checklists are maintained separate from the regulations and there will be a section in the regulations that will state this. Although the checklists are maintained separate from the regulations, staff wanted to provide this to you so you are aware of the procedure and to see if there were additional requirements you want added.

Staff ensured that all documents referenced in the regulations are on the checklist and vice versa.

5. Substantive amendments included in this draft.
  - a. The substantive amendments are described in the first section of this memo, and the PC and BCC may wish to review or discuss these in more detail at the meeting. Staff and the consultant is prepared to answer any questions that the group may have.
  - b. Not all changes from the initial draft are detailed in this memo nor shown in the redline version of the regulations. Only the substantive and significant changes are shown on the redline version.

## **SECTION 1. INTRODUCTION**

### **1.1. Title**

- A. These regulations shall be known as the Routt County Unified Development Code (UDC), as amended. They may also be referred to as “these Regulations,” “Regulations, and “this Code.”

### **1.2. Purpose**

- A. The purpose of the Unified Development Code (UDC) is to promote and protect the health, safety, and general welfare of the present and future inhabitants of Routt County, Colorado, through the establishment and enforcement of comprehensive, efficient, clear, and consistent standards, regulations, and procedures for the planning, evaluation, approval, and implementation of land uses and development within the County.
  
- B. These regulations are adopted in accordance with the Routt County Master Plan and seek to address public health, safety, and general welfare, future growth, housing and economic development. This is a non-exclusive list of the goals of the UDC:
  - 1. Facilitate the adequate provision of transportation, water, sewage, schools, parks, open space, and other public requirements;
  - 2. Ensure that public or private water supplies as needed to furnish citizens with safe potable water are provided;
  - 3. Ensure the proper installation of sanitation improvements as needed for disposal of wastes, and ensure that such facilities are operated and maintained in the condition required to perform their function;
  - 4. Encourage the proper arrangement of roads in relation to existing or planned roads, parcels of land, and in accordance with the Master Plan;
  - 5. Lessen congestion in the streets and roads;
  - 6. Protect against fire, flood, and other damage;
  - 7. Provide for drainage facilities needed for protection against flooding and restrict building on lands subject to flooding, areas covered by poor soils, and in areas poorly suited for building because of danger from landslides, avalanches, mud flows or other geologic hazards;
  - 8. Provide for adequate and convenient spaces for traffic, utilities, and access for fire-fighting apparatus;
  - 9. Ensure buildings have access to adequate light and air;
  - 10. Encourage a broad range of housing opportunities;
  - 11. Preserve open spaces and minimize rural sprawl;
  - 12. Protect urban and rural development patterns as called for in the Routt County Master Plan;
  - 13. Protect important natural and historic resources in Routt County;

14. Encourage coordination of interjurisdictional public improvements plans and programs; and
15. Establish regulations to address other matters and land uses as the Planning Commission and the Board may deem necessary in order to best protect the interests of the public.

### **1.3. Authority**

- A. It is the intent of Routt County in adopting and enforcing this UDC to exercise all relevant authority and powers conferred on it by the laws of the State of Colorado, including, but not limited to, sections of the Colorado Revised Statutes, as amended. This includes:
  1. Title 24 Article 65.1 (Areas of State Interest);
  2. Title 24 Article 67 (Planned Unit Development);
  3. Title 24 Article 68 (Vested Rights);
  4. Title 29 Article 1 (Administration of Land Development Charges);
  5. Title 29 Article 20 (Local Government Land Use Control Enabling Act and Development Impact Fees);
  6. Title 30 Article 15 (Enforcement);
  7. Title 30 Article 28 (County Planning, Zoning, Subdivision);
  8. Title 34 Article 60 (Oil and Gas Conservation); and
  9. All other direct and indirect grants of authority to County governments to address land use issues and impacts addressed by this UDC.
- B. The provisions of the UDC were originally adopted and became effective on September 8, 1970 (Subdivision Regulations) and March 7, 1972 (Zoning Regulations), and have been amended over time including reiterations on August 1972 (Subdivision Regulations) and September 27, 2011 (Zoning Regulations). This amended UDC was adopted on XXXX and became effective on XXXX.
- C. Whenever any provision of this UDC refers to or cites a section of the Colorado Revised Statutes and that section is later amended or superseded, this UDC shall be deemed amended to refer to the amended section or most closely corresponding section.

### **1.4. Applicability**

- A. Except as hereinafter provided, no structure or land shall hereafter be used or occupied and no structure or part thereof shall be erected, moved or altered unless in conformity with the Regulations herein specified for the Zone District in which it is located.
- B. The UDC applies to the entire area of Routt County, Colorado, except within incorporated municipalities.

- C. The UDC applies to all divisions of land into two or more parcels or interests for the purpose, whether immediate or future, of sale or building development or for resubdivision into smaller parcels, as well as replats and consolidations. The Subdivision regulations of the UDC do not apply to division of land into two or more parcels where all resulting parcels are greater than 35 acres.
1. No person, firm, partnership, joint venture, association or corporation shall subdivide any tract of land which is located wholly or in part in Routt County, Colorado, except those which lie in an incorporated town, nor shall any person, firm, or corporation sell, exchange or offer for sale, any parcel of land which is in any part of a subdivision of a larger tract of land, nor shall any person, firm, or corporation, offer for recording any deed conveying such a parcel of land, or any interest therein, unless there shall be on file with the County Clerk and Recorder a plat of said subdivision having the endorsement thereon of the Board; which plat shall be of record at the time of such sale or offer.
  2. All plats recorded subsequent to the passage of these Regulations shall be in accordance with all of the requirements hereof.
  3. No permits, building or other, shall be issued for the construction of any building or any other improvements requiring a permit, upon any land for which a subdivision approval is required by the UDC, unless and until the requirements thereof shall have been complied with. This requirement is not an exclusive remedy and Routt County may pursue other remedies as allowed in law or equity.
  - 4.

**1.5. Consistency with the Master Plan and other Sub-Area Plan**

- A. It is the intention of Routt County to implement planning policies adopted by the Board of County Commissioners and Planning Commission in the Routt County Master plan, Sub-Area plans, and other planning documents.
- B. The Goals and Policies of the Routt County Master Plan and adopted Sub-Area plans were incorporated in the creation of this UDC. In addition, reasonable consideration has been given to the physiographic and other natural characteristics of the Zone Districts, and their individual suitability and capability for particular uses, with a view to conserving the values of natural resources for the general welfare and encouraging the most appropriate uses of land throughout the County.
- C. The Board of County Commissioners reaffirms its commitment that the UDC and any amendments thereto be in general conformity with adopted plans and other planning studies; however, the Board of County Commissioners hereby expresses its intent that neither this UDC nor any amendment thereto may be challenged on the basis of any alleged nonconformity with any planning document, unless otherwise provided by law.



## SECTION 7: AGENCIES

### 7.1. Generally.

A. This Section governs the administration of the UDC.

### 7.2. Planning Director

A. Powers and Duties.

1. The Planning Director shall be responsible for the administration, implementation, and enforcement of the UDC.
2. The Planning Department shall perform all planning for the County, shall provide technical support and guidance for action on development applications and land use changes, and shall review and perform such other actions, as may be requested by the Board of County Commissioners or other decision-making body as set forth in the UDC.
3. The Planning Director shall be responsible for oversight of the Department and may delegate authority to other staff members of the Planning Department, subject to the requirement that the staff exercise such authority in conformance with the standards and criteria contained in the UDC. Decisions made by staff under authority so delegated shall be treated as having been made by the Planning Director.
4. Specific review authorities are identified in **Section XXX**.
5. The Planning Director may issue stop work and/or cease and desist orders for any development or land uses that have not been permitted by these regulations or are completed in a way that is inconsistent with a site specific approval or these regulations.
6. The Planning Director shall determine whether an application submitted for review is complete prior to application processing.
7. The Planning Director may refer applications to the Planning Commission or the Board of County Commissioners for final decisions of administrative permits.
8. The Planning Director may authorize a concurrent review of any application processes provided all minimum notification requirements are met.
9. The Planning Director may reduce or waive a fee for special projects that comply with the criteria outlined in the fee schedule.
10. Special fees may be charged at the discretion of the Planning Director for professional consultants or special research/analysis that is required to ensure adequate review of a development application.
11. The Planning Director has the authority to sign agreements as provided in Resolution 2022-075, as may be amended.
12. The Planning Director has the authority to approve the release of surety as provided in Resolution 2022-055, as may be amended.
13. In the occurrence that there is no Code Compliance Officer, the Planning Director shall possess the powers held by the Officer (Section 7.2.B.2).

- B. Code Compliance Officer. There shall be a Code Compliance Officer, who shall provide for fair and efficient enforcement of Routt County ordinances.
  - 1. The Code Compliance Officer shall either be an employee of the County or a contractor or agency contracted by Routt County to perform such duties as enumerated herein.
  - 2. Powers and Duties.
    - a. Enforce all provisions of the UDC.
    - b. Issue County Court summonses and complaints for violations of the UDC provided that the Code Compliance Officer shall have no authority to detain or arrest individuals or impound property.
  - 3. In the occurrence that there is no Code Compliance Officer, the Officer's powers and duties shall be delegated to the Planning Director.

### **7.3. Board of County Commissioners**

- A. Conduct of Business
  - 1. The Board of County Commissioners may also be referred to as the "County Commissioners", "Board", or BCC" in these Regulations or in other official and unofficial documents and actions.
  - 2. The Board of County Commissioners conducts business in accordance with state law and adopted County policies.
- B. Powers and Duties
  - 1. The BCC has all authorities granted by state law and this UDC. The powers and duties outlined in the UDC pertain to land use, subdivision, and zoning issues and is a non-exclusive list.
  - 2. The BCC has the authority to sign any permit, subdivision plat, resolution, or other document directly related to an application submitted for review under this UDC, and approval of an application by the BCC under this UDC shall confer signature authorization by the BCC to sign such documents.
  - 3. The BCC is responsible for review and decision-making for certain land use and development applications, as outlined in **Section XXX**.
  - 4. The BCC is responsible for hearing certain appeals from decisions made by Planning Commission **as outlined in Section XXX**.
  - 5. The BCC is responsible for any action not otherwise delegated to the Planning Commission, Board of Adjustment, or Planning Director, as the BCC may deem desirable and necessary to implement the UDC.
  - 6. In the occurrence of extenuating circumstances, such as a natural disaster or acts of god, the BCC shall have the authority to override a process and/or approval outlined in the UDC with evidence indicating the extenuating circumstances that necessitate the action.

### **7.4. Planning Commission**

A. Membership

1. The Planning Commission shall consist of nine members, and two alternate members as appointed by the Board of County Commissioners.
2. To the extent possible, all members shall be residents from four different districts and four municipalities in Routt County (North Routt – District 1, Land around Steamboat Springs – District 2, West Routt - District 3, and South Routt – District 4, the Towns of Yampa, Hayden, Oak Creek, and the City of Steamboat Springs).
3. Not more than one of the members and one of the alternate members may also be members of the Board of Adjustment. This shall not preclude Planning Commission members from serving on the Board of Adjustment as needed to ensure a quorum is achieved according to Section 7.5.A.3.
4. Each member and alternate shall serve a three-year term unless such member resigns or is removed for cause by the Board of County Commissioners upon written charges and after a public hearing.
5. Vacancies shall be filled for unexpired terms in the same manner as in the case of original appointments.
6. Alternate members of the Planning Commission shall take the place of any regular Commission member in the event that the regular member is temporarily unable to act due to the absence from the County, illness, interest in the case before the Commission, or any other reasonable cause.

B. Officers

1. The Planning Commission shall, at its first meeting following appointments made each year by the Board of County Commissioners, select a chairperson and vice-chairperson to serve one-year terms.
2. The Planning Director or his or her designee shall serve as secretary to the Planning Commission.

C. Conduct of Business

1. The Planning Commission may also be referred to as the “Commission” or “PC” in these Regulations or in other official and unofficial documents and actions.
2. The Planning Commission shall adopt and amend by-laws establishing its organization and procedures as may be necessary.

D. Powers and Duties

1. The Planning Commission shall have such authority to act as provided by State statute (Colorado Revised Statutes (C.R.S) Sections 30-28-103 and 30-28-106) and by the Board of County Commissioners.
2. The Planning Commission shall prepare and adopt a county-wide Master Plan according to C.R.S Section 30-28-106. The Commission shall also be

- responsible for reviewing and updating the Master Plan and any Sub-Area Plans as needed to reflect the goals of the County.
3. The Planning Commission shall review land use applications in accordance with the UDC, the Routt County Master Plan, and any Sub-Area Plans.

## **7.5. Board of Adjustment**

### **A. Membership.**

1. The Board of Adjustment shall consist of five members and two alternate members as appointed by the Board of County Commissioners.
2. All members shall be residents of Routt County.
3. Not more than one of the members and one of the alternate members may also be members of the Planning Commission. Up to two members of the Planning Commission may substitute for Board of Adjustment members when a quorum of regular Board of Adjustment members is not reached.
4. Each member and alternate shall serve a three-year term unless such member resigns or is removed for cause by the Board of County Commissioners upon written charges and after a public hearing.
5. Vacancies shall be filled for unexpired terms in the same manner as in the case of original appointments.
6. Alternate members of the Board of Adjustment shall take the place of any regular Board member in the event that the regular member is temporarily unable to act due to the absence from the County, illness, interest in the case before the Board, or any other reasonable cause.

### **B. Officers**

1. The Board of Adjustment shall, at its first meeting following appointments made each year by the Board of County Commissioners, select a chairperson and vice-chairperson.
2. The Planning Director or his or her designee shall serve as secretary to the Board of Adjustment.

### **C. Conduct of Business**

1. The Board of Adjustment may also be referred to as the “BOA” in these Regulations or in other official and unofficial documents and actions.
2. The Board of Adjustment shall adopt and amend by-laws establishing its organization and procedures as may be necessary.

### **D. Powers and Duties**

1. Pursuant to C.R.S Sections 30-28-117 and 118, the BOA shall have the following powers and duties.
  - a. To grant, upon an appeal relating to appellant's property, a variance from the strict application of any regulations regarding: Minimum and Maximum setbacks, Minimum lot width, Maximum allowable building height, or

Maximum separation permitted between a Secondary Dwelling Unit and a Primary Dwelling Unit.

2. No appeal to the BOA shall be allowed for building use violations that may be prosecuted pursuant to Colorado Revised Statutes, Section 30-28-124 (1) (b).

#### **7.6. Historic Preservation Board**

- A. Membership. Membership and powers and duties shall be as described in the current Resolution (2003-047).
- B. Officers
  1. The Historic Preservation Board shall, at its first meeting following appointments made each year by the Board of County Commissioners, select a chairperson and vice-chairperson.
  2. The Planning Director or his or her designee shall serve as secretary to the Historic Preservation Board.
- C. Conduct of Business
  1. The Historic Preservation Board may also be referred to as the “HPB” in these Regulations or in other official and unofficial documents and actions.
  2. The HPB shall adopt and amend by-laws establishing its organization and procedures as may be necessary.

#### **7.7. Flood Plain Administrator**

- A. The Routt County Planning Director, or his or her designee, is hereby appointed the Floodplain Administrator to administer, implement, and enforce the provisions of these regulations and other appropriate sections of 44 CFR (National Flood Insurance Program Regulations) concerning floodplain management by granting, granting with conditions, or denying applications for floodplain development permits.
- B. Powers and Duties
  1. The Flood Plain Administrator shall be responsible for reviewing, approving, and denying applications for Floodplain Development Permits.
  2. The Floodplain Administrator may issue stop work orders for any development or land uses that have not been permitted by these regulations or are completed in a way that is inconsistent with a site specific approval or these regulations.
  3. The Floodplain Administrator shall be responsible for any other powers and duties outlined in **Section 5.13.4.D.**

## **SECTION 3: USE REGULATIONS**

### **RENEWABLE ENERGY RELATED SECTIONS**

#### **3.1. Standards for Community-, and Utility- Scale Solar Energy Systems**

##### **A. Purpose**

The following section serves to encourage the efficient and effective development and use of all systems and facilities that generate renewable solar energy while protecting the public health, safety, and welfare of Routt County's residents.

1. To meet the goals of the Climate Action Plan and Master Plan, this section is intended to carry out the following actions:
  - a. Remove barriers to community renewable energy facilities, such as solar gardens, on-site generation, and virtual net metering of solar PVs;
  - b. Determine criteria that help mitigate impacts to visual resources, air quality, water quality, wildlife habitat or agricultural areas; and
  - c. Support the reuse of former coal or other fossil fuel facilities or infrastructure to aid a transition to lower carbon and renewable energy.

##### **B. Applicability and Definitions**

This section applies to all systems that produce renewable solar energy. The following definitions are applicable to solar production in Routt County:

1. "Solar Energy Systems" (SES) means an energy system of any scale designed to convert sunlight into a different form of energy. Solar Energy Systems may also be referred to as Solar Energy Facilities. Solar Energy Systems may include the following structures:
  - a. Solar collectors;
  - b. Equipment necessary for converting sunlight into a different form of energy (including photovoltaics). This may include charge regulators, inverters, and PV support structures (which may include buildings);
  - c. Transmission lines and other overhead and underground electrical distribution, collection, communications lines, towers and related appurtenances, electric transformers, electric substations, switch stations, junction boxes, battery energy storage facilities (where allowed by this section), telecommunications equipment and lines, and related power generation and transmission facilities;
  - d. Temporary and permanent roads, crane travel paths, fences, and gates;
  - e. Control buildings, maintenance buildings, maintenance yards, septic systems, laydown and staging areas, and related facilities and equipment; and
  - f. Associated landscaping, fencing and parking lots.
2. "Solar Collector" means a device used to absorb solar radiation and convert it into heat or electricity.
3. "Community-Scale Solar Energy Systems" means a Solar Energy Systems that are large in scale and primarily serve energy demands off-site from the facility. Community-Scale Solar Energy Systems are typically used to generate community- or neighborhood-wide energy. Due to their larger size, Community-

Scale Solar Energy Systems typically have more off-site and on-site impacts. Community-Scale Solar Energy Systems are those systems that are up to 20 acres in size and do not qualify as a Small-Scale Solar Energy System.

4. “Utility-Scale Solar Energy Systems” means Solar Energy Systems that are large in scale and primarily serve the energy demands off-site from the facility. Utility-Scale Systems are typically used to generate energy at the utility level and typically interconnect at a transmission level. Due to their larger size, they typically have more off-site and on-site impacts. Utility-Scale Solar Energy Systems are those systems that are up to 20 acres or larger in size.
5. “Solar Microgrids” are small-scale, localized solar energy systems that can be paired with Battery Energy Storage System and or a generator that can generate, store, and distribute electricity and may operate independently of, or in conjunction with, the main power grid. Microgrids may occur in Community-Scale Solar Energy Systems.
6. “Agrivoltaics” refers to any solar energy system that is co-located on the same parcel of land as agriculture production and/or ranching.
7. “Battery Energy Storage System” stores energy from different sources and discharges energy at a later time when needed to provide electricity or other grid services.
8. “Improved Area” means those geographic areas within the County that will be developed or altered directly by construction or operation of the project.
9. “Ground-mounted” is any solar energy system that is mounted on a rack or pole that is attached to the ground.
10. “Roof-mounted” is any solar energy system that is fastened or ballasted to a building roof.
11. “Solar Land Cover” is the entire land area that encompasses all components of the solar energy system, including but not limited to mounting equipment, panels and ancillary components of the system. Access roads, transmission lines, and fencing are not included in this calculation.
12. “Tilt” is the angle of the solar panel / collector relative to the horizontal ground plane. Tilt is most often between 5 and 40 degrees.
13. “Wildlife Corridor and Connectivity” is a designated passageway intended to preserve and facilitate the movement of wildlife species between fragmented habitats and natural areas.

### **C. Review Process**

1. Community-scale solar systems are subject to a Planning Commission review for a Conditional Use Permit Approval, pursuant to **Section 3.2.1**. They must also comply with the requirements in 3.36.D as applicable.
2. Utility-scale solar systems are subject to a Planning Commission and BCC review for a Special Use Permit Approval, pursuant to **Section XX**. They must also comply with the requirements in 3.36.D as applicable.

### **D. Performance Standards**

The following performance standards shall be met for Community-Scale and Utility-Scale Solar Energy Facilities.

1. Coordination

- a. All Applicants must work independently with the transmission or distribution provider that their system intends to interconnect with to complete their interconnection process. A Power Purchase Agreement and/or Interconnection Agreement shall be submitted prior to the issuance of any access or road improvement permit(s) or building permits.

2. Site Access

- a. Prior to commencement of any work to construct the facility, the applicant shall apply for and obtain any access or road improvement permit(s) from the Routt County Department of Public Works or CDOT, as applicable. The application shall comply with all requirements, including the then-adopted Routt County Road and Bridge Roadway Standards or CDOT standards, as applicable.
- b. New access drives shall be designed to minimize the extent of soil disturbance, water runoff, and soil compaction on the site.
- c. Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the system.

3. Road Engineering Study

- a. A Road Engineering Study shall be conducted according to Routt County Public Work's procedure. All improvements recommended by the study shall be installed prior to the commencement of any work to construct the facility.

4. Height Limitation

- a. Ground-mounted solar collectors shall not exceed twenty-five (25) feet in height, measured from the lowest grade below each solar collector to the highest extent of the solar collector rotation.

5. Visual Impacts

- a. In order to minimize the potential visual impacts of the Solar Energy System, certain activities should be minimized or avoided, as detailed below. A site plan and visual impacts statement, with a description of the impacts and net effect of the proposed project on visual quality and proposed mitigation, shall be included in the application to determine compliance with the following standards:
  - i. Avoid clear-stripping of right-of-way or easement. Any required clearing shall be designed to create a natural appearance that blends with surrounding vegetation by using variations in clearing width.
  - ii. Avoid creation of access scars.
  - iii. Avoid visually important scenic vistas, including, but not limited to, the south valley floor and the US Highway 40 and County Road 129 corridors.
  - iv. Preserve as much as possible the natural landscape.



- v. Minimize alteration of the natural slope or aspect of any hillside.
- vi. Stockpiles shall be limited to ten (10) feet in height.

6. Setbacks

- a. The area of Solar Land Cover shall conform to the setback requirements of the underlying zone district, except as set forth below.
- b. Adjoining lots may be collectively utilized for a single solar energy system facility across property lines and/or easement. In such event, the setback requirements of the underlying zone district shall be waived as to any internal property lines of the project.
  - i. When the lots do not share one single owner, collective grouping is only allowed if an agreement signed by the owners of the affected lands is recorded with the Routt County Clerk and Recorder.
  - ii. Solar energy systems may cross easements with informed consent signed by the affected easement owner, agreeing to the encroachment. This shall be an agreement signed by the owners of the affected lands.
- c. When adjacent to an existing residential building, setbacks shall comply with the following standards:
  - i. Community-Scale Solar Energy Systems. The improved area must be at least one hundred (100) feet from existing residential buildings.
  - ii. Utility-Scale Solar Energy Systems. The improved area must be at least one hundred (100) feet from existing residential buildings.
  - iii. This residential setback requirement may be reduced by up to fifty (50) percent if appropriate screening through landscaping, if an opaque fence is installed, or upon submittal of a waiver or informed consent signed by the affected landowner agreeing to the lesser setback. If landscaping or opaque fencing is substituted for setback, a landscaping plan or fencing plan shall be submitted and approved through the review process. In no case will the setback be reduced to less than that required by the underlying zone district for properties that are not part of the improved area.
- d. The Solar Energy System shall comply with waterbody setbacks according to Section 5.11.5, Minimum Setbacks from a Waterbody.

7. Site Design

- a. Applicants shall implement a site design that considers vegetation cost, effectiveness in infiltration, and diversity of an ecosystem, both under and between arrays.

8. Screening

- a. Screening and buffering shall mitigate any adverse visual and audible impacts from Solar Energy Systems to adjacent properties. Screening of transformers, substations, switch stations, batteries and associated enclosures, and buildings

is required. Screening of the Solar Collectors is not required, however is encouraged through the following techniques:

- i. The layout of these facilities shall be designed to minimize the amount of screening that is required.
  - ii. Vegetation or other screening techniques, such as fencing, may be used to effectively screen the area.
- b. Developments may be exempt from this screening requirement if the Planning Department finds that the screening requirements could negatively impact system performance.

## 9. Dust Mitigation

- a. A dust mitigation plan specific to the duration of the construction is required at the time of application.
- b. The operator shall consult with CPW on dust suppression measures that occur within 500 feet of mapped waterways.
- c. The operators of the facility shall continuously employ practices detailed in their dust mitigation plan, which include, at a minimum the following actions:
  - i. Limit area of disturbance to reduce dust generation. Minimize overlot grading for projects and phase grading with construction;
  - ii. Minimize dust through gravel, water or chemically stabilizing public and private access roads, stripped areas, transfer points and excavations. Gravel or chemical stabilization is preferred, and water stabilization shall be minimized to the extent possible;
  - iii. Increase mitigation operations immediately in response to periods of high wind conditions or dust complaints; and
  - iv. Revegetate disturbed areas as soon as possible.

## 10. Fencing

- a. The facility shall be enclosed with a security fence approved pursuant to a fencing plan. Appropriate signage shall be placed upon the fencing that warns the public of the high voltage.
- b. A fencing plan shall be included in the Wildlife Mitigation Plan, developed in consultation with CPW. All exclusionary fencing shall comply with the following requirements:
  - i. The height of the fence's top wire shall be eight (8) feet;
  - ii. Fencing shall be mesh or woven with at least six (6) inch openings; and
  - iii. No barbed wire may be used on top of the fence.

## 11. Ground Cover and Vegetation Preservation and Management

- a. Applicants shall maximize the preservation of pre-construction vegetation.
- b. For the purpose of preventing erosion and managing runoff, disturbed land, including the land under and around the solar collectors, shall be seeded with a vegetation seed mix based on prairie grasses and forbs (wildflowers) native to

Colorado, as determined by Colorado Parks and Wildlife’s “Colorado Seed Mix Tool” which includes pollinator plants where compatible with site conditions (i.e. some pollinator plants should not be established underneath solar collectors due to their height). Seeding shall occur prior to, during, and after construction.

- c. Deep-rooted vegetative cover between and under arrays shall be used to lower bulk density, increase infiltrative capacity, and reduce the need for vegetative maintenance over the life of the project.
- d. Ground cover and vegetation shall be continually maintained on the site and replaced as needed for the duration of the Use Permit. The applicant shall include a ground cover vegetation establishment and management plan as part of the application. Such plan shall include the following components:
  - i. A plan to establish vegetation to control invasive plant species and noxious weeds;
  - ii. Staged use of compatible cover crop with the final vegetative mix to bridge the time between the end of construction and establishment of final vegetative cover; and
  - iii. The use of appropriate vegetative cover under the array that can be self-sustaining and sufficient to maintain the vegetative root system and infiltrative capacity.

## 12. Erosion and Sedimentation Control

- a. Erosion and sedimentation control measures must be employed to ensure that disturbed areas and soil stockpiles are stabilized during construction. The following control measures shall be used:
  - i. Retain topsoil that is disturbed during site preparation and construction to be used on-site; and
  - ii. Utilize retained topsoil during operation of the solar facility, as reasonably feasible, in order to minimize soil compaction and improve overall stormwater flows.
- b. When topsoil is stockpiled for use during reclamation efforts, the following standards shall be met:
  - i. Save and store all salvageable topsoil for use at reclamation for higher quality revegetation; and
  - ii. Contour and condition topsoil stockpiles to a slope conducive to establishing vegetative cover.
- c. All disturbed areas shall be reseeded for revegetation within one growing season. Vegetation shall be established within three years.

## 13. Stormwater and Water Quality

- a. Solar Energy Systems shall not result in a degradation of Routt County’s water resources. The systems shall adequately maintain water quality throughout the life of the solar energy system through the following standards:

- i. Include a calculation of the watershed function in the development application. Use of the National Renewable Energy Lab (NREL)'s Photovoltaic Stormwater Research and Testing project (PV-SMaRT) may be used to determine the impact.
- ii. Incorporate infiltration into the solar array layout to ensure sheet flow. This is particularly important in areas with Class C or D soils (tight soils, fine soils, clay, etc.). Information about the site's soils shall be included in the application.
- iii. Implement measures that limit bulk density (the compaction of soils) as a method of managing stormwater runoff, water quality, and vegetation. The following measures shall be complied with:
  - (a) The soil bulk density shall be between 1.1-1.5 g/cm<sup>3</sup>. This standard may be adjusted depending on the soil classification or texture.
  - (b) The site design (array layout, vegetation selection, final stabilization procedures) shall be modified to reduce bulk density, particularly for sites with finer soils.
  - (c) Bulk density shall be measured both before and after construction, both between arrays and under arrays.
  - (d) Post-construction, if bulk density is high, the areas between arrays shall be decompacted to a minimum of six inches and under arrays to a minimum of four inches.
  - (e) Minimize grading to the greatest extent practical and select pile and array systems that require less or no grading.
  - (f) During construction, the use of heavy equipment shall be limited to specific areas to minimize soil compaction.

#### 14. Emergency Response Plan

- a. An Emergency Response Plan is required at the time of application.
- b. The applicant shall coordinate with all emergency response providers to develop the Emergency Response Plan.
- c. All personnel shall have access to the Emergency Response Plan and are required to be trained on its contents.
- d. The Plan shall describe the hazards to the facility and procedures to respond to them. It shall include at least the following:
  - i. Facility overview that describes site location, capacity and output, and key contacts including facility managers.
  - ii. Identification of all potential hazards (i.e. fire, electrical, chemical, weather-related events, and security threats)
  - iii. Equipment and areas vulnerable to hazards
  - iv. Emergency response
    - (a) Roles and responsibilities
    - (b) Contact information
    - (c) Training and drills
    - (d) Communication protocols

- v. Emergency procedures
  - (a) Fire suppression methods and equipment
  - (b) Electrical hazard lockout procedures
  - (c) Chemical hazard spill response procedures
  - (d) Severe weather monitoring and evacuation protocols
  - (e) Intrusion detection and response
- vi. Evacuation Plan
- vii. First aid and medical assistance resources and equipment

## 15. Arrangement

- a. Solar Collectors must be arranged in a way that:
  - i. Allows the passage of runoff between each Solar Collector, thereby minimizing the creation of concentrated runoff;
    - (a) Ensures a parallel layout of the drip edge to contours or install devices to ensure sheet flow from the drip edge. Larger panels require both additional separation or disconnection due to more volume at the drip edge (primarily for fixed rather than tracking arrays) and increase the need for dissipation BMPs to ensure sheet flow.
  - ii. Allows for the growth of vegetation beneath and between the collectors; and
  - iii. Provides wildlife movement corridors through the project area, as determined necessary, for the purpose of facilitating wildlife passage and landscape connectivity.

## 16. Underground Cables

- a. All electrical cables on the improved area shall be buried except for string wires that connect between solar collectors, collection circuits between rows of solar arrays that are no more than four (4) feet above grade crossings, substations, switchyards, and circuit voltages greater than 34.5 kilovolts (where necessary).

## 17. Provisions for Battery Energy Storage Systems

- a. All batteries shall be configured so that battery cells are placed in a Battery Energy Storage System. The Energy Storage System shall provide a secondary layer of physical containment for the batteries and be equipped with cooling, ventilation, and fire suppression systems.

## 18. Sound

- a. The sound pressure level of the Solar Energy System and all ancillary equipment shall not exceed the residential standard of 55 dBA at the property line of an adjoining non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard.

## 19. Agricultural Lands

- a. Agricultural land is highly valued in Routt County, and the preservation of these lands is a high priority. While the placement of Solar Collectors may limit agricultural uses for prime farmland during the time of operation, the use of these lands for Solar Energy Systems creates the opportunity to enable longer-term use of the land for agricultural uses versus other land use types. The applicant and facility operator shall ensure that the facility does not have significant adverse impacts on agricultural lands and agricultural operations, and facilitates the long term ownership of the farmland. The decommissioning plan shall incorporate how this will be addressed; see Section 3.36.D.26.

## 20. Agrivoltaics

- a. The use of land for both agriculture, including livestock ranching, and solar photovoltaic energy generation, may be permitted in the following instances:
  - i. Only appropriate plant species for the desired agricultural operation are used;
  - ii. A written erosion and sediment control plan is developed for agricultural plowing or tilling activities; and
  - iii. Application of chemical fertilization or herbicides/pesticides is limited to the agronomic needs of the crop(s).

## 21. Parking

- a. Staging activities and parking of equipment and vehicles is prohibited on County maintained roads. All staging and parking shall occur on-site.

## 22. Maintenance

- a. The facility shall be maintained and operated to ensure the safety of site personnel and the public, and in a manner that minimizes fire risk caused by vegetation. All security fencing and gates should be regularly inspected and maintained to preclude access from the public and wildlife.
- b. A Weed Management Plan is required. This plan must identify preventive measures to minimize the spread of noxious weeds as determined by Colorado Noxious Weed Law limitations and requirements. The following measures are required:
  - i. Prior to ground-disturbing activities, the site shall be assessed by a Colorado licensed biologist;
  - ii. Routine maintenance of vegetation;
  - iii. The operator will stockpile cleared vegetation and salvaged topsoil adjacent to areas identified for weed infestations;
  - iv. All contractor vehicles and equipment will be cleaned prior to arrival at the work site using compressed air or high-pressure water spraying equipment;
  - v. Limit the size of any vegetation and/or ground disturbance to the absolute minimum necessary;

- vi. Avoid creating unnecessary soil conditions that promote weed germination and establishment;
- vii. Ensure that straw or hay bales used for sediment barrier installations or mulch distribution are certified weed-free;
- viii. Continue to monitor known infestation areas to determine if these areas require remedial action and treatment.

#### 23. Workforce Housing Plan

- a. A plan describing the methods of housing workers associated with construction of the solar facility is required. This should identify the method for providing housing and a plan for transportation of workers.

#### 24. Wildlife

- a. Sensitive wildlife species and their habitats shall be avoided to the greatest extent possible, especially during critical periods. All efforts shall be made to avoid facility activities and uses from bisecting any existing habitats and wildlife corridors on, and adjacent to, the site. This includes the clearing of land and placement of infrastructure, such as collectors, transmission lines, roads and other appurtenances that may bisect the important habitat or wildlife corridors. Applicants shall mitigate the impact that the project has on both the local wildlife on the site, as well as the overall wildlife patterns in the region, through the following actions:
  - i. Applicant shall work with CPW to identify high priority habitat and design their project to avoid, minimize and mitigate potential impacts to wildlife and their habitats.
  - ii. The facility shall maintain landscape connectivity of habitats and provide wildlife movement corridors through and around the improved area and shall be identified on the submitted Site Plan.
  - iii. A pre-development wildlife and habitat survey (“Pre-Development Wildlife Survey”) shall be performed by a qualified wildlife biologist. Such survey shall be conducted for at least one year prior to application and will be required to assess any potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, wildlife, endangered and threatened species. Consultation with CPW will be required before survey protocol is finalized.
  - iv. The Pre-Development Wildlife Survey shall be included in a Wildlife Mitigation Plan, which shall identify all appropriate measures to avoid, minimize, mitigate anticipated adverse impacts and show those measures on the site plan, where applicable. For the purpose of this section, mitigation is defined as measures intended to offset the loss or degradation of wildlife habitats offsite, or through other means to compensate for the unavoidable impacts of the proposed development.

- (a) The Wildlife Mitigation Plan shall be used to avoid, minimize and mitigate potential impacts to wildlife and their habitats. A narrative identifying impacts and what

measures and alternatives were considered shall be submitted. Wildlife protection measures may include seasonal timing limitations, best management practices, and compensatory measures consistent with CPW's Recommendations to Avoid and Minimize Impacts to Wildlife from Land Use Development in Colorado. The Wildlife Mitigation Plan shall include a fencing plan and locations of dust suppression measures in compliance with the standards found in section 3.36.D.9 and 3.36.D.10.

- v. A post-development wildlife and habitat survey shall be conducted. Such survey shall be at least one year in length and shall be conducted using similar methods as the pre-development survey.
- vi. Pre-construction and post-construction wildlife reports are required, and shall include all forms of raw data collected at onset, during, and for the post construction surveys after a yearlong study is completed. A referral from CPW, submitted at the time of application, shall be used to confirm compliance with this standard.
- vii. All screening techniques shall be placed in such a way to provide pathways that enable the movement of wildlife.
- viii. All exclusionary fencing shall comply with the standards found in section **3.36.D.10.**

## 25. Lighting

- a. Any lights installed as necessary for the facility's operation shall comply with the following standards:
  - i. Be limited to the inverter and/or substation locations only;
  - ii. Have cut-off shields and use down-lighting to avoid illuminating dark skies and reduce visibility from beyond the project site;
  - iii. Be the minimum amount of brightness necessary for operational safety and security;
  - iv. Be controlled by automatic controls including timers or motion detectors; and
  - v. Not include any flashing or intermittent lights.

## 26. Transmission Lines

- a. If additional overhead transmission lines are required, measures to minimize impacts to birds shall be implemented. These may include, but are not limited to increasing line visibility, insulating wires to cover exposed connections, installing raptor perch deterrents on cross arms, and increasing the distance between wires so there is lesser risk of contact with energized wires.

## 27. A Decommissioning/Reclamation Plan

- a. A Decommissioning/Reclamation Plan shall be submitted with the application and shall comply with the following:



- i. The Decommissioning Plan shall address how agricultural lands will be restored to enable agricultural usage following removal of the solar energy system.
- ii. Decommissioning/reclamation shall commence no later than twelve (12) months after equipment is removed from the SES having equipment removed, power is disconnected, or loss of lease. All decommissioning/reclamation shall be completed within twenty four (24) months from the start date of the work.
- iii. All non-utility owned equipment, conduits, structures, fencing, and foundations shall be removed to a depth of at least three (3) feet below grade. Any soil exposed during the removal shall be stabilized in accordance with the currently effective CDOT erosion control and stormwater quality standards.
- iv. All fences, graveled areas and access roads shall be removed unless a landowner agreement to retain these items is presented, in writing, in which the property owner agrees for these items to remain.
- v. To the extent possible, the property shall be restored to a condition reasonably similar to its condition prior to development of the facility.
- vi. The developer or owner of the facility is responsible for the decommissioning.
- vii. Decommissioning/Reclamation Surety. Valid surety shall be a condition of operating a Community-Scale or Utility-Scale Solar Facility. However, nothing in this section shall relieve the applicant of liability for closure, post-closure, or corrective action costs.
  - (a) Surety, in a form in compliance with the Routt County Insurance and Surety Requirements policy, for the decommission and reclamation of the site shall be required prior to building permit issuance. The surety shall be in an amount of 150% of the approved current engineer cost estimate for decommissioning.
  - (b) The surety amount shall be updated every five (5) years, in concurrence with the updated engineer cost estimate detailed below, Decommissioning and Reclamation Cost Estimates.
- viii. Decommissioning and Reclamation Cost Estimates. A qualified engineer's cost estimate for decommissioning/reclamation is required and shall be included in the Decommissioning Plan. Cost estimates and surety shall be updated every five (5) years from the establishment and submittal of the surety, shall include all costs associated with the dismantlement, recycling, and safe disposal of facility components and site reclamation activities and shall include the following elements:
  - (a) All labor, equipment, transportation, and disposal costs associated with the removal of all facility components from the facility site;
  - (b) All costs associated with full reclamation of the facility site, including removal of non-native soils, grading to approximate pre-development contours, fences, and constructed access roads;

- (c) All costs associated with reclamation of any primary agricultural soils at the facility site to ensure that each area of direct impact is materially similar to the condition it was before construction;
  - (d) All decommissioning/reclamation activity management, site supervision, site safety costs;
  - (e) All costs related to complete revegetation of the site to return it to its condition prior to the development of the facility; and
  - (f) Any other costs, including administrative costs, associated with the decommissioning and reclamation of the facility site.
  - (g) The salvage value from any of the facility components can be subtracted from this estimate.
- ix. Revegetation. Land disturbed as part of the construction, commercial operation and/or decommissioning process shall be reseeded or revegetated to a condition reasonably similar to its condition prior to development of the facility, as determined after a complete growing season.
- (a) Soil shall be tested twice. The first test shall occur prior to energy being produced by the system. The second shall be after the system ceases production but before any equipment is removed. The two shall be compared to evaluate any soil contamination and develop a remediation program, if necessary. Soil tests sample shall be representative of the overall area through a combination of five (5) sample spots in the area. Areas that have a clear difference in soil type, drainage, or plant growth shall be avoided for sample collection.
  - (b) Land disturbed as part of the decommissioning process shall be reseeded or re-vegetated with crops and native seed mixes according to the Colorado Parks and Wildlife’s “Colorado Seed Mix Tool” or with other vegetative species that provide ecological services, such as carbon sequestration, increased soil health, habitat preservation, or water quality improvements.
  - (c) Revegetation or other land disturbance mitigation shall be completed within one (1) calendar year of removal of the solar facility. A one-time extension of six-months may be granted by the Planning Director if required to ensure a complete growing season.

28. Economic and Community Benefit Analysis.

- a. An analysis is required to measure the benefits to the community and the local economy. The analysis shall include a description of how the project impacts the following:
  - i. Economic and Fiscal Impact
    - (a) Evaluate the number and type of jobs the project is expected to create, both during construction and for the duration of its operation. Identify how these employees will be housed during the project.

- (b) Assess the project's likely potential to generate income for residents and businesses in the area.
  - (c) Evaluate the potential tax revenue generated by the project and its impact on the County budget.
  - (d) Identify the costs to the County, if any, associated with the solar energy facility (e.g., the cost of infrastructure upgrades) and compare with the anticipated economic and community benefits.
- ii. Community Benefit
    - (a) Identify any proposed infrastructure improvements, such as road upgrades or utility enhancements, and how those will benefit the community.
    - (b) Identify how the solution for housing employees will benefit the community in the long term.
    - (c) Identify any other anticipated community benefits.
  - iii. Transportation and Mobility:
    - (d) Analyze the project's impact on traffic including anticipated vehicle trips per day and how these transportation impacts will be mitigated during the construction phase and longer term operations.
  - iv. Infrastructure
    - (a) Analyze the demand for local government services including roads, schools, water and wastewater treatment, water supply, emergency services, transportation, infrastructure, and other County services necessary to accommodate the employees of the facility.
  - v. Recreation
    - (a) Identify any impacts to existing outdoor recreation facilities, such as trails, and how those impacts will be mitigated.
    - (b) Identify whether the project creates or enhances public spaces.

### **3.2. Standards for Small-Scale Solar Energy Systems**

#### **A. Purpose**

The following requirements and performance standards are intended to guide the safe and efficient construction and operation of solar for both ground- and roof-mounted, small-scale, single-site use. This section also sets standards for placement and maintenance of these facilities to mitigate impacts on adjacent lands and the surrounding environment.

#### **B. Definitions**

1. "Small-Scale Solar Energy Systems" means renewable energy systems that are used on an individual site scale. The energy produced by these facilities is intended for private use on the parcel, or an adjacent parcel. These are typically

smaller solar collectors able to produce energy necessary for all, or a fraction of, the energy demands on the individual site. Due to their limited size, they typically have fewer off-site impacts.

### C. Review Process

1. Small-Scale Solar Energy Systems, both roof-mounted and ground-mounted, are exempt from a separate land use review, and require only a building permit. Confirmation of compliance with 3.36 will be evaluated through the building permit review. Small-Scale Solar Energy Systems are a use by right in all zone districts.
2. Small-Scale Solar Energy Systems that require a modification to standards in 3.37.D.4 require a variance from the Board of Adjustment pursuant to Section 3.2.1.

### D. Performance Standards

1. The following performance standards shall be met for Small-Scale Solar Energy Systems:
  - a. These systems shall be located on a buildable lot/parcel or platted out-lot;
  - b. Small-Scale Solar Energy Systems may be ground or roof mounted;
    - i. The following standards are applicable to all roof-mounted collectors:
      - (a) Roof-mounted collectors may be mounted on any legal structure, subject to review through the building permit process;
      - (b) Roof-mounted collectors shall be mounted as flush as possible to the roof. To achieve proper solar orientation, collectors may exceed the roofline by up to five (5) feet vertically above the high point, or the maximum permitted height of the structure by up to five (5) feet, whichever is more restrictive).
      - (c) Roof-mounted collectors shall comply with applicable state and local fire codes to ensure emergency access to the roof, provide pathways to specific areas of the roof, provide areas for smoke ventilation, and provide emergency egress from the roof.
    - ii. Ground-mounted Solar Systems shall be subject to the following setbacks:
      - (a) Property line setbacks of the underlying zone district or fifteen (15) feet, whichever is less;
      - (b) Waterbody setbacks according to Section 5.11.5, Minimum Setbacks from a Waterbody; and
      - (c) Minimum of forty-five (45) feet from the centerline of the roadway, or fifteen (15) feet from the edge of the roadway, whichever is greater.

## **SECTION 3: USE REGULATIONS RENEWABLE ENERGY RELATED SECTIONS**

### **3.1. Standards for Community-, and Utility- Scale Solar Energy Systems**

#### **A. Purpose**

The following section serves to encourage the efficient and effective development and use of all systems and facilities that generate renewable solar energy while protecting the public health, safety, and welfare of Routt County's residents.

1. To meet the goals of the Climate Action Plan and Master Plan, this section is intended to carry out the following actions:
  - a. Remove barriers to community renewable energy facilities, such as solar gardens, on-site generation, and virtual net metering of solar PVs;
  - b. Determine criteria that help mitigate impacts to visual resources, air quality, water quality, wildlife habitat or agricultural areas; and
  - c. Support the reuse of former coal or other fossil fuel facilities or infrastructure to aid a transition to lower carbon and renewable energy.

#### **B. Applicability and Definitions**

This section applies to all systems that produce renewable solar energy. The following definitions are applicable to solar production in Routt County:

1. "Solar Energy Systems" (SES) means an energy system of any scale designed to convert sunlight into a different form of energy. Solar Energy Systems may also be referred to as Solar Energy Facilities. Solar Energy Systems may include the following structures:
  - a. Solar collectors;
  - b. Equipment necessary for converting sunlight into a different form of energy (including photovoltaics). This may include charge regulators, inverters, and PV support structures (which may include buildings);
  - c. Transmission lines and other overhead and underground electrical distribution, collection, communications lines, towers and related appurtenances, electric transformers, electric substations, switch stations, junction boxes, battery energy storage facilities (where allowed by this section), telecommunications equipment and lines, and related power generation and transmission facilities;
  - d. Temporary and permanent roads, crane travel paths, fences, and gates;
  - e. Control buildings, maintenance buildings, maintenance yards, septic systems, laydown and staging areas, and related facilities and equipment; and
  - f. Associated landscaping, fencing and parking lots.
2. "Solar Collector" means a device used to absorb solar radiation and convert it into heat or electricity.
3. "Community-Scale Solar Energy Systems" means a Solar Energy Systems that are large in scale and primarily serve energy demands off-site from the facility. Community-Scale Solar Energy Systems are typically used to generate community- or neighborhood-wide energy. Due to their larger size, Community-

Scale Solar Energy Systems typically have more off-site and on-site impacts. Community-Scale Solar Energy Systems are those systems that are up to 20 acres in size and do not qualify as a Small-Scale Solar Energy System.

4. “Utility-Scale Solar Energy Systems” means Solar Energy Systems that are large in scale and primarily serve the energy demands off-site from the facility. Utility-Scale Systems are typically used to generate energy at the utility level and typically interconnect at a transmission level. Due to their larger size, they typically have more off-site and on-site impacts. Utility-Scale Solar Energy Systems are those systems that are up to 20 acres or larger in size.
5. “Solar Microgrids” are small-scale, localized solar energy systems that can be paired with Battery Energy Storage System and or a generator that can generate, store, and distribute electricity and may operate independently of, or in conjunction with, the main power grid. Microgrids may occur in Community-Scale Solar Energy Systems.
6. “Agrivoltaics” refers to any solar energy system that is co-located on the same parcel of land as agriculture production and/or ranching.
7. “Battery Energy Storage System” stores energy from different sources and discharges energy at a later time when needed to provide electricity or other grid services.
8. “Improved Area” means those geographic areas within the County that will be developed or altered directly by construction or operation of the project.
9. “Ground-mounted” is any solar energy system that is mounted on a rack or pole that is attached to the ground.
10. “Roof-mounted” is any solar energy system that is fastened or ballasted to a building roof.
11. “Solar Land Cover” is the entire land area that encompasses all components of the solar energy system, including but not limited to mounting equipment, panels and ancillary components of the system. Access roads, transmission lines, and fencing are not included in this calculation.
12. “Tilt” is the angle of the solar panel / collector relative to the horizontal ground plane. Tilt is most often between 5 and 40 degrees.
13. “Wildlife Corridor and Connectivity” is a designated passageway intended to preserve and facilitate the movement of wildlife species between fragmented habitats and natural areas.

### **C. Review Process**

1. Community-scale solar systems are subject to a Planning Commission review for a Conditional Use Permit Approval, pursuant to **Section 3.2.1**. They must also comply with the requirements in 3.36.D as applicable.
2. Utility-scale solar systems are subject to a Planning Commission and BCC review for a Special Use Permit Approval, pursuant to **Section XX**. They must also comply with the requirements in 3.36.D as applicable.

### **D. Performance Standards**

The following performance standards shall be met for Community-Scale and Utility-Scale Solar Energy Facilities.

1. Coordination

- a. All Applicants must work independently with the transmission or distribution provider that their system intends to interconnect with to complete their interconnection process. A Power Purchase Agreement and/or Interconnection Agreement shall be submitted prior to the issuance of any access or road improvement permit(s) or building permits.

2. Site Access

- a. Prior to commencement of any work to construct the facility, the applicant shall apply for and obtain any access or road improvement permit(s) from the Routt County Department of Public Works or CDOT, as applicable. The application shall comply with all requirements, including the then-adopted Routt County Road and Bridge Roadway Standards or CDOT standards, as applicable.
- b. New access drives shall be designed to minimize the extent of soil disturbance, water runoff, and soil compaction on the site.
- c. Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the system.

3. Road Engineering Study

- a. A Road Engineering Study shall be conducted according to Routt County Public Work's procedure. All improvements recommended by the study shall be installed prior to the commencement of any work to construct the facility.

4. Height Limitation

- a. Ground-mounted solar collectors shall not exceed twenty-five (25) feet in height, measured from the lowest grade below each solar collector to the highest extent of the solar collector rotation.

5. Visual Impacts

- a. In order to minimize the potential visual impacts of the Solar Energy System, certain activities should be minimized or avoided, as detailed below. A site plan and visual impacts statement, with a description of the impacts and net effect of the proposed project on visual quality and proposed mitigation, shall be included in the application to determine compliance with the following standards:
  - i. Avoid clear-stripping of right-of-way or easement. Any required clearing shall be designed to create a natural appearance that blends with surrounding vegetation by using variations in clearing width.
  - ii. Avoid creation of access scars.
  - iii. Avoid visually important scenic vistas, including, but not limited to, the south valley floor and the US Highway 40 and County Road 129 corridors.
  - iv. Preserve as much as possible the natural landscape.

- v. Minimize alteration of the natural slope or aspect of any hillside.
- vi. Stockpiles shall be limited to ten (10) feet in height.

6. Setbacks

- a. The area of Solar Land Cover shall conform to the setback requirements of the underlying zone district, except as set forth below.
- b. Adjoining lots may be collectively utilized for a single solar energy system facility across property lines and/or easement. In such event, the setback requirements of the underlying zone district shall be waived as to any internal property lines of the project.
  - i. When the lots do not share one single owner, collective grouping is only allowed if an agreement signed by the owners of the affected lands is recorded with the Routt County Clerk and Recorder.
  - ii. Solar energy systems may cross easements with informed consent signed by the affected easement owner, agreeing to the encroachment. This shall be an agreement signed by the owners of the affected lands.
- c. When adjacent to an existing residential building, setbacks shall comply with the following standards:
  - i. Community-Scale Solar Energy Systems. The improved area must be at least one hundred (100) feet from existing residential buildings.
  - ii. Utility-Scale Solar Energy Systems. The improved area must be at least one hundred (100) feet from existing residential buildings.
  - iii. This residential setback requirement may be reduced by up to fifty (50) percent if appropriate screening through landscaping, if an opaque fence is installed, or upon submittal of a waiver or informed consent signed by the affected landowner agreeing to the lesser setback. If landscaping or opaque fencing is substituted for setback, a landscaping plan or fencing plan shall be submitted and approved through the review process. In no case will the setback be reduced to less than that required by the underlying zone district for properties that are not part of the improved area.
- d. The Solar Energy System shall comply with waterbody setbacks according to Section 5.11.5, Minimum Setbacks from a Waterbody.

7. Site Design

- a. Applicants shall implement a site design that considers vegetation cost, effectiveness in infiltration, and diversity of an ecosystem, both under and between arrays.

8. Screening

- a. Screening and buffering shall mitigate any adverse visual and audible impacts from Solar Energy Systems to adjacent properties. Screening of transformers, substations, switch stations, batteries and associated enclosures, and buildings



is required. Screening of the Solar Collectors is not required, however is encouraged through the following techniques:

- i. The layout of these facilities shall be designed to minimize the amount of screening that is required.
  - ii. Vegetation or other screening techniques, such as fencing, may be used to effectively screen the area.
- b. Developments may be exempt from this screening requirement if the Planning Department finds that the screening requirements could negatively impact system performance.

#### 9. Dust Mitigation

- a. A dust mitigation plan specific to the duration of the construction is required at the time of application.
- b. The operator shall consult with CPW on dust suppression measures that occur within 500 feet of mapped waterways.
- c. The operators of the facility shall continuously employ practices detailed in their dust mitigation plan, which include, at a minimum the following actions:
  - i. Limit area of disturbance to reduce dust generation. Minimize overlot grading for projects and phase grading with construction;
  - ii. Minimize dust through gravel, water or chemically stabilizing public and private access roads, stripped areas, transfer points and excavations. Gravel or chemical stabilization is preferred, and water stabilization shall be minimized to the extent possible;
  - iii. Increase mitigation operations immediately in response to periods of high wind conditions or dust complaints; and
  - iv. Revegetate disturbed areas as soon as possible.

#### 10. Fencing

- a. The facility shall be enclosed with a security fence approved pursuant to a fencing plan. Appropriate signage shall be placed upon the fencing that warns the public of the high voltage.
- b. A fencing plan shall be included in the Wildlife Mitigation Plan, developed in consultation with CPW. All exclusionary fencing shall comply with the following requirements:
  - i. The height of the fence's top wire shall be eight (8) feet;
  - ii. Fencing shall be mesh or woven with at least six (6) inch openings; and
  - iii. No barbed wire may be used on top of the fence.

#### 11. Ground Cover and Vegetation Preservation and Management

- a. Applicants shall maximize the preservation of pre-construction vegetation.
- b. For the purpose of preventing erosion and managing runoff, disturbed land, including the land under and around the solar collectors, shall be seeded with a vegetation seed mix based on prairie grasses and forbs (wildflowers) native to

Colorado, as determined by Colorado Parks and Wildlife’s “Colorado Seed Mix Tool” which includes pollinator plants where compatible with site conditions (i.e. some pollinator plants should not be established underneath solar collectors due to their height). Seeding shall occur prior to, during, and after construction.

- c. Deep-rooted vegetative cover between and under arrays shall be used to lower bulk density, increase infiltrative capacity, and reduce the need for vegetative maintenance over the life of the project.
- d. Ground cover and vegetation shall be continually maintained on the site and replaced as needed for the duration of the Use Permit. The applicant shall include a ground cover vegetation establishment and management plan as part of the application. Such plan shall include the following components:
  - i. A plan to establish vegetation to control invasive plant species and noxious weeds;
  - ii. Staged use of compatible cover crop with the final vegetative mix to bridge the time between the end of construction and establishment of final vegetative cover; and
  - iii. The use of appropriate vegetative cover under the array that can be self-sustaining and sufficient to maintain the vegetative root system and infiltrative capacity.

## 12. Erosion and Sedimentation Control

- a. Erosion and sedimentation control measures must be employed to ensure that disturbed areas and soil stockpiles are stabilized during construction. The following control measures shall be used:
  - i. Retain topsoil that is disturbed during site preparation and construction to be used on-site; and
  - ii. Utilize retained topsoil during operation of the solar facility, as reasonably feasible, in order to minimize soil compaction and improve overall stormwater flows.
- b. When topsoil is stockpiled for use during reclamation efforts, the following standards shall be met:
  - i. Save and store all salvageable topsoil for use at reclamation for higher quality revegetation; and
  - ii. Contour and condition topsoil stockpiles to a slope conducive to establishing vegetative cover.
- c. All disturbed areas shall be reseeded for revegetation within one growing season. Vegetation shall be established within three years.

## 13. Stormwater and Water Quality

- a. Solar Energy Systems shall not result in a degradation of Routt County’s water resources. The systems shall adequately maintain water quality throughout the life of the solar energy system through the following standards:

- i. Include a calculation of the watershed function in the development application. Use of the National Renewable Energy Lab (NREL)'s Photovoltaic Stormwater Research and Testing project (PV-SMaRT) may be used to determine the impact.
- ii. Incorporate infiltration into the solar array layout to ensure sheet flow. This is particularly important in areas with Class C or D soils (tight soils, fine soils, clay, etc.). Information about the site's soils shall be included in the application.
- iii. Implement measures that limit bulk density (the compaction of soils) as a method of managing stormwater runoff, water quality, and vegetation. The following measures shall be complied with:
  - (a) The soil bulk density shall be between 1.1-1.5 g/cm<sup>3</sup>. This standard may be adjusted depending on the soil classification or texture.
  - (b) The site design (array layout, vegetation selection, final stabilization procedures) shall be modified to reduce bulk density, particularly for sites with finer soils.
  - (c) Bulk density shall be measured both before and after construction, both between arrays and under arrays.
  - (d) Post-construction, if bulk density is high, the areas between arrays shall be decompacted to a minimum of six inches and under arrays to a minimum of four inches.
  - (e) Minimize grading to the greatest extent practical and select pile and array systems that require less or no grading.
  - (f) During construction, the use of heavy equipment shall be limited to specific areas to minimize soil compaction.

#### 14. Emergency Response Plan

- a. An Emergency Response Plan is required at the time of application.
- b. The applicant shall coordinate with all emergency response providers to develop the Emergency Response Plan.
- c. All personnel shall have access to the Emergency Response Plan and are required to be trained on its contents.
- d. The Plan shall describe the hazards to the facility and procedures to respond to them. It shall include at least the following:
  - i. Facility overview that describes site location, capacity and output, and key contacts including facility managers.
  - ii. Identification of all potential hazards (i.e. fire, electrical, chemical, weather-related events, and security threats)
  - iii. Equipment and areas vulnerable to hazards
  - iv. Emergency response
    - (a) Roles and responsibilities
    - (b) Contact information
    - (c) Training and drills
    - (d) Communication protocols

- v. Emergency procedures
  - (a) Fire suppression methods and equipment
  - (b) Electrical hazard lockout procedures
  - (c) Chemical hazard spill response procedures
  - (d) Severe weather monitoring and evacuation protocols
  - (e) Intrusion detection and response
- vi. Evacuation Plan
- vii. First aid and medical assistance resources and equipment

## 15. Arrangement

- a. Solar Collectors must be arranged in a way that:
  - i. Allows the passage of runoff between each Solar Collector, thereby minimizing the creation of concentrated runoff;
    - (f) Ensures a parallel layout of the drip edge to contours or install devices to ensure sheet flow from the drip edge. Larger panels require both additional separation or disconnection due to more volume at the drip edge (primarily for fixed rather than tracking arrays) and increase the need for dissipation BMPs to ensure sheet flow.
  - ii. Allows for the growth of vegetation beneath and between the collectors; and
  - iii. Provides wildlife movement corridors through the project area, as determined necessary, for the purpose of facilitating wildlife passage and landscape connectivity.

## 16. Underground Cables

- a. All electrical cables on the improved area shall be buried except for string wires that connect between solar collectors, collection circuits between rows of solar arrays that are no more than four (4) feet above grade crossings, substations, switchyards, and circuit voltages greater than 34.5 kilovolts (where necessary).

## 17. Provisions for Battery Energy Storage Systems

- a. All batteries shall be configured so that battery cells are placed in a Battery Energy Storage System. The Energy Storage System shall provide a secondary layer of physical containment for the batteries and be equipped with cooling, ventilation, and fire suppression systems.

## 18. Sound

- a. The sound pressure level of the Solar Energy System and all ancillary equipment shall not exceed the residential standard of 55 dBA at the property line of an adjoining non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard.

## 19. Agricultural Lands

- a. Agricultural land is highly valued in Routt County, and the preservation of these lands is a high priority. While the placement of Solar Collectors may limit agricultural uses for prime farmland during the time of operation, the use of these lands for Solar Energy Systems creates the opportunity to enable longer-term use of the land for agricultural uses versus other land use types. The applicant and facility operator shall ensure that the facility does not have significant adverse impacts on agricultural lands and agricultural operations, and facilitates the long term ownership of the farmland. The decommissioning plan shall incorporate how this will be addressed; see Section 3.36.D.26.

## 20. Agrivoltaics

- a. The use of land for both agriculture, including livestock ranching, and solar photovoltaic energy generation, may be permitted in the following instances:
  - i. Only appropriate plant species for the desired agricultural operation are used;
  - ii. A written erosion and sediment control plan is developed for agricultural plowing or tilling activities; and
  - iii. Application of chemical fertilization or herbicides/pesticides is limited to the agronomic needs of the crop(s).

## 21. Parking

- a. Staging activities and parking of equipment and vehicles is prohibited on County maintained roads. All staging and parking shall occur on-site.

## 22. Maintenance

- a. The facility shall be maintained and operated to ensure the safety of site personnel and the public, and in a manner that minimizes fire risk caused by vegetation. All security fencing and gates should be regularly inspected and maintained to preclude access from the public and wildlife.
- b. A Weed Management Plan is required. This plan must identify preventive measures to minimize the spread of noxious weeds as determined by Colorado Noxious Weed Law limitations and requirements. The following measures are required:
  - i. Prior to ground-disturbing activities, the site shall be assessed by a Colorado licensed biologist;
  - ii. Routine maintenance of vegetation;
  - iii. The operator will stockpile cleared vegetation and salvaged topsoil adjacent to areas identified for weed infestations;
  - iv. All contractor vehicles and equipment will be cleaned prior to arrival at the work site using compressed air or high-pressure water spraying equipment;
  - v. Limit the size of any vegetation and/or ground disturbance to the absolute minimum necessary;

- vi. Avoid creating unnecessary soil conditions that promote weed germination and establishment;
- vii. Ensure that straw or hay bales used for sediment barrier installations or mulch distribution are certified weed-free;
- viii. Continue to monitor known infestation areas to determine if these areas require remedial action and treatment.

### 23. Workforce Housing Plan

- a. A plan describing the methods of housing workers associated with construction of the solar facility is required. This should identify the method for providing housing and a plan for transportation of workers.

### 24. Wildlife

- a. Sensitive wildlife species and their habitats shall be avoided to the greatest extent possible, especially during critical periods. All efforts shall be made to avoid facility activities and uses from bisecting any existing habitats and wildlife corridors on, and adjacent to, the site. This includes the clearing of land and placement of infrastructure, such as collectors, transmission lines, roads and other appurtenances that may bisect the important habitat or wildlife corridors. Applicants shall mitigate the impact that the project has on both the local wildlife on the site, as well as the overall wildlife patterns in the region, through the following actions:
  - i. Applicant shall work with CPW to identify high priority habitat and design their project to avoid, minimize and mitigate potential impacts to wildlife and their habitats.
  - ii. The facility shall maintain landscape connectivity of habitats and provide wildlife movement corridors through and around the improved area and shall be identified on the submitted Site Plan.
  - iii. A pre-development wildlife and habitat survey (“Pre-Development Wildlife Survey”) shall be performed by a qualified wildlife biologist. Such survey shall be conducted for at least one year prior to application and will be required to assess any potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, wildlife, endangered and threatened species. Consultation with CPW will be required before survey protocol is finalized.
  - iv. The Pre-Development Wildlife Survey shall be included in a Wildlife Mitigation Plan, which shall identify all appropriate measures to avoid, minimize, mitigate anticipated adverse impacts and show those measures on the site plan, where applicable. For the purpose of this section, mitigation is defined as measures intended to offset the loss or degradation of wildlife habitats offsite, or through other means to compensate for the unavoidable impacts of the proposed development.
    - (a) The Wildlife Mitigation Plan shall be used to avoid, minimize and mitigate potential impacts to wildlife and their habitats. A narrative identifying impacts and what measures and alternatives

were considered shall be submitted. Wildlife protection measures may include seasonal timing limitations, best management practices, and compensatory measures consistent with CPW's Recommendations to Avoid and Minimize Impacts to Wildlife from Land Use Development in Colorado. The Wildlife Mitigation Plan shall include a fencing plan and locations of dust suppression measures in compliance with the standards found in section 3.36.D.9 and 3.36.D.10.

- v. A post-development wildlife and habitat survey shall be conducted. Such survey shall be at least one year in length and shall be conducted using similar methods as the pre-development survey.
- vi. Pre-construction and post-construction wildlife reports are required, and shall include all forms of raw data collected at onset, during, and for the post construction surveys after a yearlong study is completed. A referral from CPW, submitted at the time of application, shall be used to confirm compliance with this standard.
- vii. All screening techniques shall be placed in such a way to provide pathways that enable the movement of wildlife.
- viii. All exclusionary fencing shall comply with the standards found in section 3.36.D.10.

## 25. Lighting

- a. Any lights installed as necessary for the facility's operation shall comply with the following standards:
  - i. Be limited to the inverter and/or substation locations only;
  - ii. Have cut-off shields and use down-lighting to avoid illuminating dark skies and reduce visibility from beyond the project site;
  - iii. Be the minimum amount of brightness necessary for operational safety and security;
  - iv. Be controlled by automatic controls including timers or motion detectors; and
  - v. Not include any flashing or intermittent lights.

## 26. Transmission Lines

- a. If additional overhead transmission lines are required, measures to minimize impacts to birds shall be implemented. These may include, but are not limited to increasing line visibility, insulating wires to cover exposed connections, installing raptor perch deterrents on cross arms, and increasing the distance between wires so there is lesser risk of contact with energized wires.

## 27. A Decommissioning/Reclamation Plan

- a. A Decommissioning/Reclamation Plan shall be submitted with the application and shall comply with the following:

- i. The Decommissioning Plan shall address how agricultural lands will be restored to enable agricultural usage following removal of the solar energy system.
- ii. Decommissioning/reclamation shall commence no later than twelve (12) months after equipment is removed from the SES having equipment removed, power is disconnected, or loss of lease. All decommissioning/reclamation shall be completed within twenty four (24) months from the start date of the work.
- iii. All non-utility owned equipment, conduits, structures, fencing, and foundations shall be removed to a depth of at least three (3) feet below grade. Any soil exposed during the removal shall be stabilized in accordance with the currently effective CDOT erosion control and stormwater quality standards.
- iv. All fences, graveled areas and access roads shall be removed unless a landowner agreement to retain these items is presented, in writing, in which the property owner agrees for these items to remain.
- v. To the extent possible, the property shall be restored to a condition reasonably similar to its condition prior to development of the facility.
- vi. The developer or owner of the facility is responsible for the decommissioning.
- vii. Decommissioning/Reclamation Surety. Valid surety shall be a condition of operating a Community-Scale or Utility-Scale Solar Facility. However, nothing in this section shall relieve the applicant of liability for closure, post-closure, or corrective action costs.
  - (a) Surety, in a form in compliance with the Routt County Insurance and Surety Requirements policy, for the decommission and reclamation of the site shall be required prior to building permit issuance. The surety shall be in an amount of 150% of the approved current engineer cost estimate for decommissioning.
  - (b) The surety amount shall be updated every five (5) years, in concurrence with the updated engineer cost estimate detailed below, Decommissioning and Reclamation Cost Estimates.
- viii. Decommissioning and Reclamation Cost Estimates. A qualified engineer's cost estimate for decommissioning/reclamation is required and shall be included in the Decommissioning Plan. Cost estimates and surety shall be updated every five (5) years from the establishment and submittal of the surety, shall include all costs associated with the dismantlement, recycling, and safe disposal of facility components and site reclamation activities and shall include the following elements:
  - (a) All labor, equipment, transportation, and disposal costs associated with the removal of all facility components from the facility site;
  - (b) All costs associated with full reclamation of the facility site, including removal of non-native soils, grading to approximate pre-development contours, fences, and constructed access roads;



- (c) All costs associated with reclamation of any primary agricultural soils at the facility site to ensure that each area of direct impact is materially similar to the condition it was before construction;
  - (d) All decommissioning/reclamation activity management, site supervision, site safety costs;
  - (e) All costs related to complete revegetation of the site to return it to its condition prior to the development of the facility; and
  - (f) Any other costs, including administrative costs, associated with the decommissioning and reclamation of the facility site.
  - (g) The salvage value from any of the facility components can be subtracted from this estimate.
- ix. Revegetation. Land disturbed as part of the construction, commercial operation and/or decommissioning process shall be reseeded or revegetated to a condition reasonably similar to its condition prior to development of the facility, as determined after a complete growing season.
- (a) Soil shall be tested twice. The first test shall occur prior to energy being produced by the system. The second shall be after the system ceases production but before any equipment is removed. The two shall be compared to evaluate any soil contamination and develop a remediation program, if necessary. Soil tests sample shall be representative of the overall area through a combination of five (5) sample spots in the area. Areas that have a clear difference in soil type, drainage, or plant growth shall be avoided for sample collection.
  - (b) Land disturbed as part of the decommissioning process shall be reseeded or re-vegetated with crops and native seed mixes according to the Colorado Parks and Wildlife’s “Colorado Seed Mix Tool” or with other vegetative species that provide ecological services, such as carbon sequestration, increased soil health, habitat preservation, or water quality improvements.
  - (c) Revegetation or other land disturbance mitigation shall be completed within one (1) calendar year of removal of the solar facility. A one-time extension of six-months may be granted by the Planning Director if required to ensure a complete growing season.

28. Economic and Community Benefit Analysis.

- a. An analysis is required to measure the benefits to the community and the local economy. The analysis shall include a description of how the project impacts the following:
  - i. Economic and Fiscal Impact
    - (a) Evaluate the number and type of jobs the project is expected to create, both during construction and for the duration of its operation. Identify how these employees will be housed during the project.

- (b) Assess the project's likely potential to generate income for residents and businesses in the area.
  - (c) Evaluate the potential tax revenue generated by the project and its impact on the County budget.
  - (d) Identify the costs to the County, if any, associated with the solar energy facility (e.g., the cost of infrastructure upgrades) and compare with the anticipated economic and community benefits.
- ii. Community Benefit
    - (a) Identify any proposed infrastructure improvements, such as road upgrades or utility enhancements, and how those will benefit the community.
    - (b) Identify how the solution for housing employees will benefit the community in the long term.
    - (c) Identify any other anticipated community benefits.
  - iii. Transportation and Mobility:
    - (d) Analyze the project's impact on traffic including anticipated vehicle trips per day and how these transportation impacts will be mitigated during the construction phase and longer term operations.
  - iv. Infrastructure
    - (a) Analyze the demand for local government services including roads, schools, water and wastewater treatment, water supply, emergency services, transportation, infrastructure, and other County services necessary to accommodate the employees of the facility.
  - v. Recreation
    - (a) Identify any impacts to existing outdoor recreation facilities, such as trails, and how those impacts will be mitigated.
    - (b) Identify whether the project creates or enhances public spaces.

### **3.2. Standards for Small-Scale Solar Energy Systems**

#### **A. Purpose**

The following requirements and performance standards are intended to guide the safe and efficient construction and operation of solar for both ground- and roof-mounted, small-scale, single-site use. This section also sets standards for placement and maintenance of these facilities to mitigate impacts on adjacent lands and the surrounding environment.

#### **B. Definitions**

1. "Small-Scale Solar Energy Systems" means renewable energy systems that are used on an individual site scale. The energy produced by these facilities is intended for private use on the parcel, or an adjacent parcel. These are typically

smaller solar collectors able to produce energy necessary for all, or a fraction of, the energy demands on the individual site. Due to their limited size, they typically have fewer off-site impacts.

### C. Review Process

1. Small-Scale Solar Energy Systems, both roof-mounted and ground-mounted, are exempt from a separate land use review, and require only a building permit. Confirmation of compliance with 3.36 will be evaluated through the building permit review. Small-Scale Solar Energy Systems are a use by right in all zone districts.
2. Small-Scale Solar Energy Systems that require a modification to standards in 3.37.D.4 require a variance from the Board of Adjustment pursuant to Section 3.2.1.

### D. Performance Standards

1. The following performance standards shall be met for Small-Scale Solar Energy Systems:
  - a. These systems shall be located on a buildable lot/parcel or platted out-lot;
  - b. Small-Scale Solar Energy Systems may be ground or roof mounted;
    - i. The following standards are applicable to all roof-mounted collectors:
      - (a) Roof-mounted collectors may be mounted on any legal structure, subject to review through the building permit process;
      - (b) Roof-mounted collectors shall be mounted as flush as possible to the roof. To achieve proper solar orientation, collectors may exceed the roofline by up to five (5) feet vertically above the high point, or the maximum permitted height of the structure by up to five (5) feet, whichever is more restrictive).
      - (c) Roof-mounted collectors shall comply with applicable state and local fire codes to ensure emergency access to the roof, provide pathways to specific areas of the roof, provide areas for smoke ventilation, and provide emergency egress from the roof.
    - ii. Ground-mounted Solar Systems shall be subject to the following setbacks:
      - (a) Property line setbacks of the underlying zone district or fifteen (15) feet, whichever is less;
      - (b) Waterbody setbacks according to Section 5.11.5, Minimum Setbacks from a Waterbody; and
      - (c) Minimum of forty-five (45) feet from the centerline of the roadway, or fifteen (15) feet from the edge of the roadway, whichever is greater.



## Colorado Solar & Storage Association

1536 Wynkoop St, Suite 104  
Denver, Colorado 80238

### Memorandum on Bond Requirement in Routt County's Draft Land Use Codes

To Whom It May Concern:

The Colorado Solar and Storage Association has concerns about the posting of a decommissioning bond upon construction starting on a project because it is unnecessary and will add additional cost to a project, potentially making the project uneconomic to build.

If the county is requiring a bond to be placed when construction starts, then the developer will have to account for/estimate in modeling more operational expenses, leading to a less favorable Power Purchase Price with Xcel or Tri-State and therefore decreasing the chances of a project being selected in Routt County and the county seeing increased investment and subsequent tax revenue.

For example, assume a developer must post a \$50 million bond at year 0. In simple math, a \$50 million bond at a 1.5% annual rate at year 0 vs year 15 is an additional \$1,125,000 unnecessary expense that developers will have to account for. That increase in operational expenses could be the deciding factor of being awarded a PPA vs not and a county with more favorable regulations becoming home to that winning project.

Additionally, an issue that may have been overlooked is that the more items developers are required to "have in place prior to construction" only increases the risk of having our contractors standing by with a shovel in hand. Each day that a critical item is missing eats away at the buffers that are built into construction schedules.

From our experience, missing crossing agreements or associated administrative "red tape" can hold up construction and increase the risk of costly delays on PPAs, contractor availability etc. Developers want to build good projects that are not rushed, not projects that are rushed, which can result in myriad future problems. While this may sound like "please go easy on us," that isn't what we are advocating for. This bond is just another thing to check off which will result in a real risk of increased construction costs due to delays on actually being able to start.

Finally, we have concerns about the term "starting construction." Tax incentives, getting Best Management Practices for erosion control in place, perimeter fencing erected, roads graded – all things that would constitute as construction are low-impact, preliminary activities. Developers need the flexibility to make projects work around nature, utility needs and local community desires. Requiring that a bond be in place prior to some minor earth work would be pointless and add cost.

We request that the bond be in place five years prior to end of the Power Purchase Agreement to protect the local community and to ensure projects are economically viable.

Sincerely,

Mike Kruger  
President and CEO



<b>OFFICE USE</b>	Presubmittal Code _____
	Planner Initials _____
	Identifier _____

**SUBMITTAL CHECKLIST**  
**Solar Energy System**

*This checklist shall be completed by the staff planner at the pre-application meeting and must be submitted online. Failure to submit all required information may delay the review of the application.*

Project Type \_\_\_\_\_ Planning Type \_\_\_\_\_

- Application fee \$ \_\_\_\_\_
- Proof of ownership: Deed or Assessor's Property Record Card
- Statement of Authority, if required
- Vicinity map
- Written narrative / detailed description of subject site and proposed use, including the following information, as applicable:
  - Description of use
  - Hours of operation
  - Anticipated number of employees (construction and operation phases)
  - Phases of construction, if applicable
  - Nameplate generating capacity
  - Project development schedule (beginning and ending of construction and beginning of operation)
  - Timetable for obtaining all required permits
  - Anticipated traffic
  - Access to the property
  - Ancillary facilities (batteries, substations, transmission lines, etc.)
  - Total number of acres proposed for development
  - Type of equipment and vehicles
  - Estimated end of operation
- Mitigation Plan for any significant negative impacts (Refer to Section 6, Routt County Zoning Regulations). This analysis shall include a description of baseline conditions and the impacts that the proposed use may cause; a description of how the applicant will mitigate impacts
- Site plan, drawn to scale, including the following information, as applicable:
  - Scale & North arrow
  - Location and dimensions of all existing and proposed buildings, structures, and fencing
  - Location and dimensions of all outdoor storage, trash enclosures, staging areas, and/or other outdoor use areas
  - Parking areas (temporary and permanent)
  - Snow storage
  - Outline of the perimeter of the proposed Improved Area
  - Utilities
  - Water bodies, drainages, and ditches
  - Wetlands, floodplain, and steep slopes (>30%)
  - 2' contours
  - Geologic hazards
  - Location and size of battery storage or substations
  - Voltages and lengths of transmission lines leading out of the facility
  - Location and type of proposed landscaping and/or screening
  - Location, width, and surface of all existing and proposed access roads and drives
  - Location and method of hazardous materials storage
  - Exterior lighting
  - Phasing Plan, if applicable
  - Grading and Excavation Plan
  - Existing land uses
  - Location of areas of moderate or severe soil limitations
  - Haul route for construction phase(s)
- Floor plans and elevation drawings of proposed buildings, drawn to scale
- Wildlife Mitigation Plan and consultation comments from Colorado Parks and Wildlife
- Transportation Summary Information (per Road & Bridge Department standards), for Road Engineering Study
- Plan for housing employees during the construction phase
- Interconnection agreement with local utility

- Decommission/Reclamation plan for the end of the useful life of the facility including cost estimate for decommissioning/reclamation
- Visual impact statement and proposed mitigation measures, including glare reduction
- Emergency response plan, describe hazards and other dangers and emergency procedures
- Stormwater Management n Plan
- Water Quality Preservation Plan
- Dust Mitigation Plan
- Ground Cover and Vegetation Preservation and Management Plan
- Weed Management Plan
- Economic and Community Benefit Analysis
- Additional information as required by Planning Director \_\_\_\_\_
  - CDOT Access Permit (submitted or approved), if applicable